

REMARKS

Claims 1-3 are withdrawn as being drawn to non-elected subject matter. Claims 4-15 are under examination. No new claim amendments are presented at this time. Rather, reconsideration of the application is requested in view of the remarks which follow.

Election/Restrictions

Applicant affirms the election of Group II (directed to claims 4-15) drawn to a process for the production of vinyl chloride. Such election was made orally with the Examiner on September 13, 2007. Accordingly, claims 1-3 stand withdrawn.

Claim Rejections under 35 USC §103

Claim 4 stands rejected under 35 USC §103(a) over Link et al. (US 4,798,914).

Claims 4-15 stand rejected under 35 USC §103(a) over Link et al. in view of Dummer et al. (US 4,822,932).

The rejections are traversed. The cited documents, even in combination, do not teach or suggest the features of the present invention and are insufficient to sustain the §103 rejections.

The present invention, as recited in independent claim 4, is directed to a process for the production of vinyl chloride by thermal cracking of 1,2-dichloroethane in a cracking furnace in which a medium pressure of from 1.4 to 2.5 MPa is maintained in the system. Further, an externally heatable and separately regulatable heat exchanger is provided. This externally heatable and adjustable heat exchanger is a critical feature of the invention and is necessary to prevent pressure and temperature fluctuations in the system.

The art cited is distinct from the present invention for at least the following reasons.

Link et al. is directed to a process for the production of vinyl chloride by thermal cracking of 1,2- dichloroethane wherein the thermal energy of the cracking gas (i.e. the gas leaving the cracking furnace) is utilized to heat liquid 1,2-dichloroethane in a heat exchanger. The pressure in the cracking furnace in the process according to Link et al. is higher than in the process according to the present invention.

Link et al. do not disclose the use of a heat exchanger which is externally heatable and separately regulatable. Therefore, in Link's process, pressure fluctuations and temperature fluctuations within the system cannot be compensated for. Applicant notes that EP 0264065 which is noted on page 1 of the present application corresponds to US 4,798,914 (Link et al.). As stated on page 2, lines 9-11 of the present application, the object of the invention was to provide a process for the production of vinyl chloride in which the economic efficiency is improved. The Table set forth on page 5 shows the invention in comparison with the prior art cited in the application. From this Table, it is clearly shown that the total energy consumption of EDC cracking according to the present invention is lower than in the process of Link et al. Further, the refrigeration output for liquefying the hydrogen chloride (i.e. the electrical energy that has to be used to generate cold in order to condense the quantity of hydrogen chloride required as return material in the first distillation column) is much lower according to the present invention when compared to Link et al. Since Link et al. does not disclose or even suggest the use of an externally heatable and adjustable heat exchanger, the advantages associated therewith would not have been obvious to a person skilled in the art.

As stated on page 6, line 27 to page 7, line 4, the tabular presentation clearly shows that the method according to the present invention makes it possible to obtain the three decisive advantages of low pressure cracking: high yield, low rate of by-product formation, long operating time of the furnace and low energy consumption.

Further, the heat recovery from the quench overhead gases with heat exchanger (7) is another distinctive feature of the present invention and further increases heat efficiency.

Dummer cannot remedy the deficiencies of Link et al. Dummer et al. relate to a method of treating the reaction product of the pyrolysis of 1,2-dichloroethane. Dummer et al. do not deal with the cracking process itself and therefore provide no teaching or suggestion about the cracking process.

Accordingly, the rejections are properly withdrawn. For example, it is well-known that to establish a *prima facie* case of obviousness, three basic criteria must be met: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; (2) there must be a reasonable expectation of success; and (3) the prior art reference(s) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP § 2143.

There is no suggestion or motivation, either in the reference itself or in the knowledge generally available to one of ordinary skill in the art, to modify the cited reference to make the claimed invention, nor is there a reasonable expectation of success.

In view of the foregoing, Applicant believes the pending application is in condition for immediate allowance.

PETITION FOR EXTENSION OF TIME AND FEE AUTHORIZATION

Applicant requests a one month extension of time for filing the within response. Please charge any fees associated with this submission to our Deposit

Account, No. 04-1105, Reference 64223(52059). Any overpayment should be credited to said Deposit Account.

Dated: January 28, 2008

Respectfully submitted,

Electronic signature: /Christine C. O'Day/
Christine C. O'Day

Registration No.: 38,256
EDWARDS ANGELL PALMER & DODGE
LLP

P.O. Box 55874
Boston, Massachusetts 02205
(617) 517-5558
Attorneys/Agents For Applicant